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ABSTRACT

The Secondary School Graduate Follow-Up Program for the Deaf gathered information from deaf high-school graduates of five classes (1978, 1979, 1980, 1981, and 1982). The majority of the 273 respondents, who responded repeatedly to surveying from 1981 to 1985, were between ages 20 and 25. The study sought to examine trends in the educational and vocational activities of deaf secondary graduates by applying a longitudinal sequential component to the project's data. Results included the following: At 1 year, 10 percent of the graduates had engaged in some type of continuing education, and by 5 years, over 60 percent had done so. Seventy-five percent of the respondents' degrees were earned in occupational areas, primarily in mechanical and engineering technologies and data processing. Labor force participation rates were approximately 10 percent below national rates for the same ages. Unemployment rates averaged 30 percent across all the surveys. Respondents were primarily employed in the manufacturing sector, followed by professional and related services and the retail trade industry. Mean weekly earnings increased over time and as educational level increased, although increments were small. (JDD)

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SECONDARY SCHOOL GRADUATE FOLLOW-UP PROGRAM FOR THE DEAF

A PROGRAM TO IDENTIFY THE CURRENT COMPARATIVE STATUS OF GRADUATES IN TERMS OF EMPLOYMENT, OCCUPATIONS, INCOME AND CONTINUING EDUCATION

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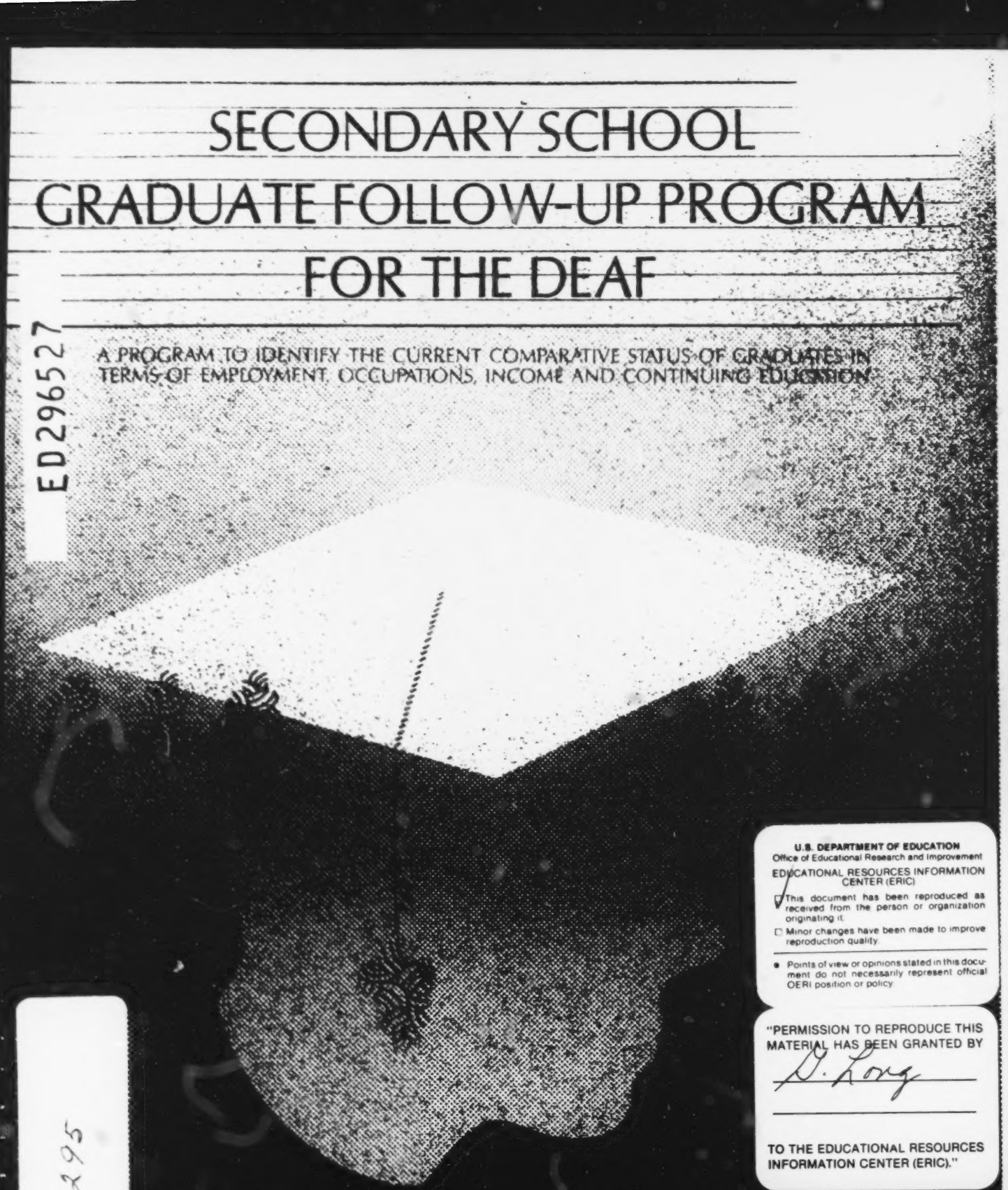

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EC 210295

A Longitudinal Look
1981 to 1985

The Secondary School Graduate Follow-up Program for the Deaf

A Longitudinal Look

1981 to 1985

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Janet MacLeod-Gallinger

March 15, 1987

The research reported in this document was produced at the National Technical Institute for the Deaf in the course of an agreement between the Rochester Institute of Technology and the U.S. Office of Education.

EC 210 295

Participating Schools:

American School for the Deaf, CT
Arizona State School for the Deaf and Blind, AZ
Atlanta Area School for the Deaf, GA
California School for the Deaf, Fremont, CA
Dallas Regional Day School for the Deaf, TX
Florida School for the Deaf and Blind, FL
Hinsdale South High School, Hearing Impaired Program, IL
Illinois School for the Deaf, IL
Kentucky School for the Deaf, KY
Lexington School for the Deaf, NY
Louisiana State School for the Deaf, LA
Maryland School for the Deaf, MD
Mill Neck Manor Lutheran School for the Deaf, NY
Minnesota State Academy for the Deaf, MN
Mississippi School for the Deaf, MS
Model Secondary School for the Deaf, D.C.*
Monroe County Hearing Impaired Children's Program, MI
Montana State School for the Deaf and Blind, MT
Nebraska School for the Deaf, NE
New York School for the Deaf, NY*
North Dakota School for the Deaf, ND
Oklahoma School for the Deaf, OK
Oregon School for the Deaf, OR
Pennsylvania School for the Deaf, PA*
Rochester School for the Deaf, NY
Scranton State School for the Deaf, PA
South Dakota School for the Deaf, SD
St. Mary's School for the Deaf, NY
Texas School for the Deaf, TX
Washington State School for the Deaf*

*Schools which have been, but currently are not members of the program

Executive Summary

The information contained in this report is derived from responses of 273 deaf high school graduates of five classes (1978, 1979, 1980, 1981 and 1982) who responded repeatedly to surveying over the period 1981 to 1985. All but the class of 1980, captured at all three intervals, were surveyed at points one and three, or three and five years since graduating. The majority were between ages 20 and 25.

The intent of this study is to examine trends in the educational and vocational activities of deaf secondary graduates by employing the longitudinal sequential component of the program's design. Results are summarized as follows:

Education - At one year ten percent had engaged in some type of continuing education, and by five years, over 60 percent had.

Overall, 18.8 percent of respondents undertaking degree programs had graduated at the five year point, and a third were still continuing their education.

At the end of the fifth year, a total of 51 degrees had been earned. Of these, 73 percent were diplomas and certificates, 22 percent associates, and five percent baccalaureates.

Respondents' degrees were earned 75 percent in occupational areas, primarily in mechanical and engineering technologies and data processing.

Labor Force - Labor force participation rates ran 62 to 75 percent one to five years since high school, approximately ten percent below national rates for same ages.

Unemployment rates averaged 30 percent across intervals with little variation.

Among respondents out of the labor force, overall 57 percent were so due to school enrollment. Highest enrollment rates were at the three year interval (62.8 percent) since high school.

Industries/Occupations - Respondents are primarily employed in the manufacturing sector, as is true for the general population, but at slightly lower rates. Relative to national rates, more respondents were employed in the "Professional, Business and Repair Services" and in "Public Administration" areas.

Category of occupation employed in remained essentially the same across educational levels, with the exception of "Precision Production, Craft and Repair," where percentages increased among degree completers. Most respondents were employed in "Technical, Sales and Administrative Support" occupations, or "Operatives, Fabricators and Laborers."

Earnings - Mean weekly earnings increased over time and as educational level increased, although increments were small. Greater changes occur after the five year point as demonstrated when graduates ten and 20 years out are included.

INTRODUCTION

The Secondary School Graduate Follow-Up for the Deaf project has been gathering information from deaf high school graduates since the program was initiated in 1979 by the Educational Research Committee of the Conference of Educational Administrators Serving the Deaf (CEASD). The goal of the committee was to establish a systematic and ongoing follow-up of deaf high school graduates to enable educators to report the educational, occupational and earnings attainments of students beyond high school. Such information permits comparisons with other deaf populations as well as with hearing high school graduates. Moreover, as a result of continued collection of such information, a data base exists which permits a longitudinal look at the attainments of deaf high school graduates.

The follow-up was field tested in 1979 with seven schools. Since the results of the field test were positive, the project was continued with the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology (RIT) managing the program. An additional 12 participant schools administered the survey in 1980. Since the 1980 survey year, the number of schools has grown to twenty-seven.

The 1984-85 survey marked the fifth year of the program. This five year period offers an excellent opportunity to analyze the educational and occupational attainments of the respondents longitudinally. During the five years some graduates have been surveyed two and three times, at two-year intervals. The results reported in this paper are derived from information provided by the individuals who responded to repeated surveys.

METHOD

Design. Each year the results from the survey have been reported for the most recent administration in a cross-sectional format. However, the design of the follow-up program is longitudinal sequential (Baltes, 1968; Buss, 1973), whereby a

subgroup of the graduating classes is surveyed repeatedly as defined by a pre-determined schedule. The design is also developmental, using graduating classes and years since graduation to follow changes in the educational and vocational activities of deaf high school graduates. The factors of maturation (time since graduation) and additional education will be analyzed in terms of their effects upon labor force status, occupational classification, and earnings status of graduates responding more than once to the questionnaire during the five years of the program.

Subjects. There are a total of 3,167 respondents to the five survey years 1980-81 through 1984-85. Table 1 describes the classes that were surveyed during

Table 1. Graduating classes surveyed by survey year, and number of subjects responding to more than one administration of the questionnaire.

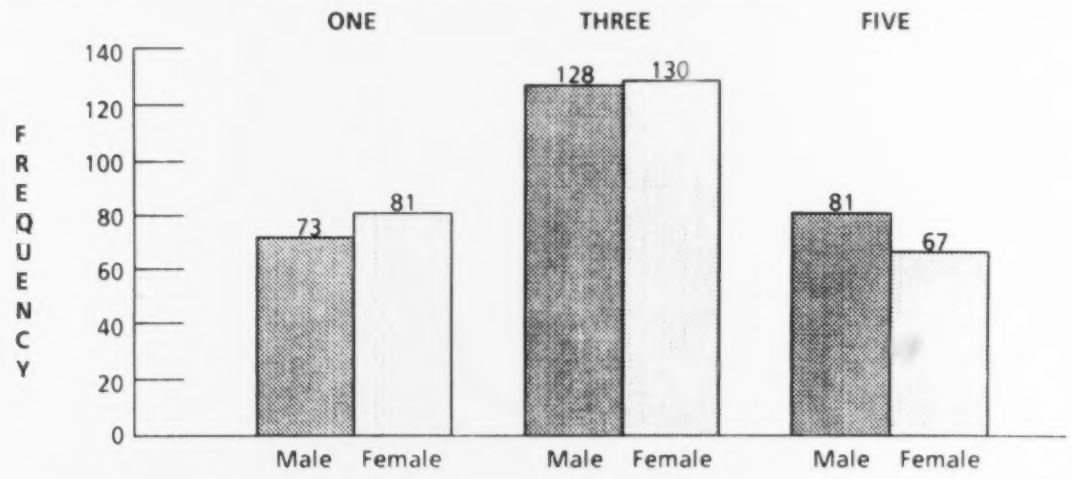
SURVEY YEAR	GRADUATING CLASS				
1980-81	1980 (73)	1978 (68)	1976	1970	1960
1981-82	1981 (56)	1979 (41)	1977	1971	1961
1982-83	1982 (25)	1980 (68)	1978 (68)	1972	1962
1983-84	1983	1981 (56)	1979 (41)	1973	1963
1984-85	1984	1982 (25)	1980 (39)	1974	1964

each year--classes graduating 1, 3, 5, 10 and 20 years before the survey year were sent questionnaires. The diagonal lines in the table indicate the classes that have been surveyed more than once. Classes 1978, 79, 81 and 82 were contacted twice, and the class of 1980 was surveyed three times. The subgroup, representing the

repeated measurements, consists of 560 responses provided by 273 separate individuals. These repeated responses can be classified by length of time since graduation: one year, three years, and five years, and represent the subjects for this study.

Table 2 provides a breakdown of the sample by gender, age, and the interval since graduation. Representation of males and females are evenly distributed although there are fewer females responding at the five-year interval. The ages of the respondents generally represent deaf persons between 20 and 25.

Table 2. Sex and age of subjects by years since graduation from high school.



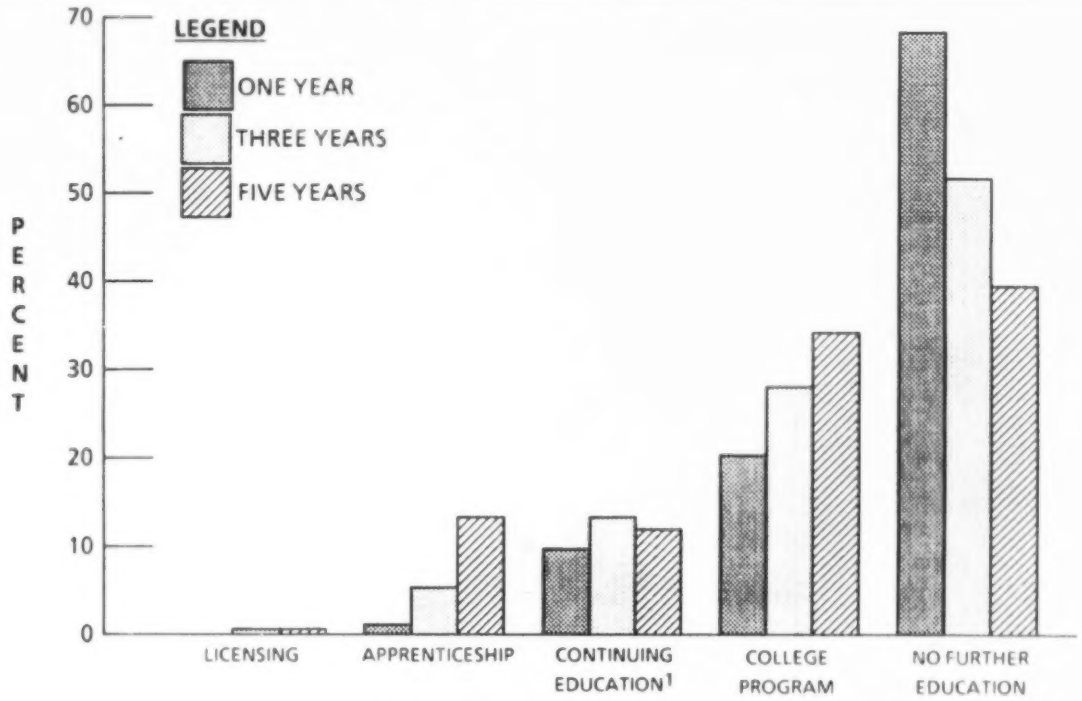
	ONE		THREE		FIVE	
Percent	47.4	52.6	49.6	50.4	54.7	45.3
Total N	154		258		148	
Mean Age	20.3 years		22.4 years		24.5 years	

RESULTS

Postsecondary Education. Graduates are asked to indicate the types of postsecondary education they have had since graduation. Specific information is requested about completed and/or current educational activities, including the name and school type attended, instructional program, and degrees earned.

Table 3 contains the percentages of respondents who have had some additional education after high school by type of education. This information is displayed by length of time since graduation.

Table 3. Percentage of graduates reporting additional education since graduating from high school.



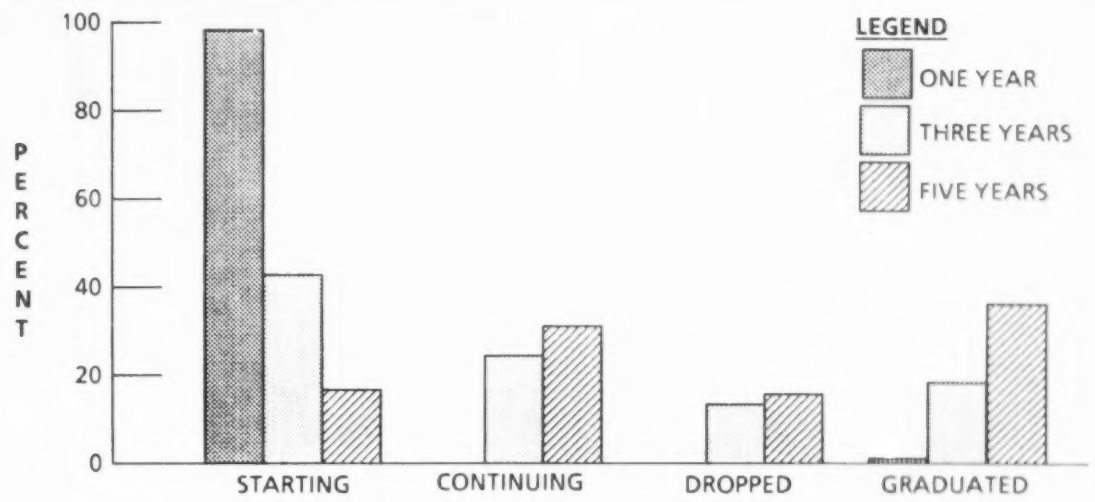
By end of the first year after graduation, almost ten percent of the respondents had participated in some continuing education and twenty percent were enrolled in college courses. A very small percentage were involved in apprenticeship programs, and no one reported having enrolled in a program leading to a license. By the third year out of high school, continuing education experiences had increased by four percent, college attendance by eight percent. Five years after

[1]Educational experiences not having any certification as an outcome. Examples would include an auto mechanics course at the local high school, or a crafts workshop offered by the local museum.

graduation more than one third of the graduates had had some college level experience. Overall, the ratio of some postsecondary educational activity to none reversed itself during the five years since graduation from high school. At year one, only 31.4 percent reported some additional education, while after five years over 60 percent reported some form of postsecondary education.

While Table 3 describes the types of postsecondary education attempted by graduates, it provides no information about the status of that education at each of the intervals. Table 4 presents the educational status of graduates who were

Table 4. The postsecondary educational process by intervals since graduating from high school.



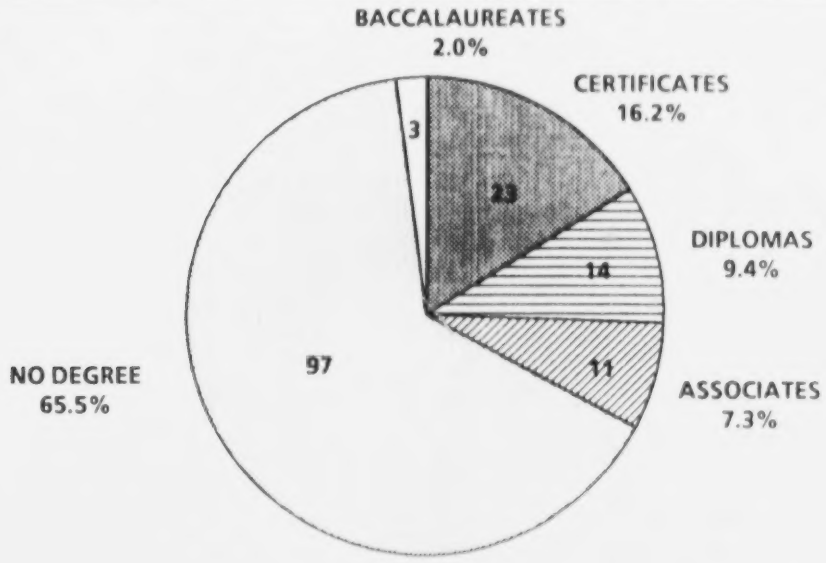
involved in postsecondary education at each of the three time intervals. Among respondents who were enrolled in instructional programs at one year out of high school almost all, as would be expected, were just starting their programs. Only one person had graduated. By three years out, approximately 43.2 percent were just starting programs, 4.5 percent were continuing, 13.5 percent had dropped, and 18.7 percent reported having graduated. After five years from graduation fewer respondents were just beginning a program but approximately one third

were either continuing (31.2%) or reported having graduated (36.4%). Overall, 18.8 percent of respondents undertaking programs of study had completed them at a point five years from high school. The national rates for all persons age 25 and over who had completed one to three years of college is 15.8 percent; and 19.1 percent for those completing four or more years of college (SAUS, No. 216, 1986). The national figures are somewhat lower relative to completion of one- and two-year degrees, and higher for completion of four-year degrees than among the sample. In part this is due to the relatively higher percentage of one- and two-year degrees earned by deaf adults, and on the other hand, the longer average time deaf students take to complete four-year programs.

The postsecondary educational pursuits of this sample, offer a general idea of the types of education in which deaf high school graduates engage; however the question concerning program completion is also important. Each year the graduates are asked to report the types of postsecondary degrees they have earned. By the end of the first year only one certificate was reported earned, while 29 degrees had been earned by the third year, and 51 by the end of the fifth year. Table 5 reports the types of degrees earned cumulatively five years after graduation. Of the 51 degrees, only 3 (2%) achieved the bachelor's degree while the majority of degrees earned were certificates and diplomas. It is known that about 15 percent of respondents at five years out were still enrolled in some continuing education. It is possible that some of these were still pursuing a college degree.

Labor Force Participation. Labor Force refers to all civilian noninstitutionalized individuals, 16 years and over. The labor force is classified into two categories: individuals working or seeking employment are referred to as In the Labor Force while those who are not employed and not seeking employment are referred to as Out of the Labor Force. Generally, during the working years, the longer individuals have been a part of the labor force, the higher their

Table 5. Type and number of degrees earned five years after graduating from high school.

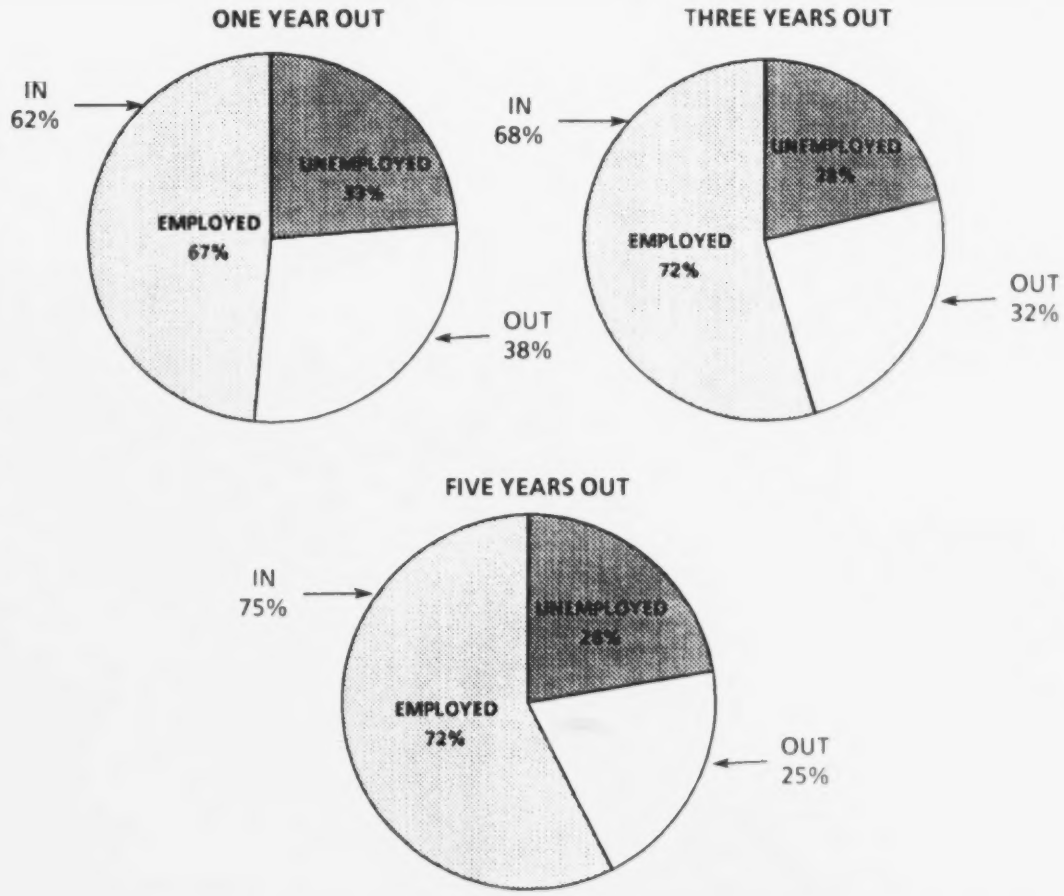


employment rate. It must be noted that the sample of secondary school graduates selected for this study are in the early part of their working lives (the average age for those five years from graduation is only 25). Their rates of participation in the labor force are affected by their age, and moreover, are influenced by whether or not they directly entered the work force, or chose to enroll in postsecondary schooling.

The labor force status of the respondents are presented in Table 6, categorized by the three intervals since high school. The labor force participation rates of the sample are ten percent less than for hearing persons of the same age (68 versus 77 percent) as recorded over the past four years (SAUS, No. 660, 1986).

Within the IN the labor force group are those employed and those not employed, but actively seeking work. Overall, for those in the labor force employment rate is about 70 percent, and varies little from one to five years from graduation; however, more individuals are in the labor force as time from graduation

Table 6. Labor force participation rates by years since graduating from high school.



increases. Percentages of individuals reporting that they were OUT of the labor force became smaller as time from graduation increased. One of the major reasons for being out of the labor force is school enrollment. Therefore, as more graduates complete postsecondary education, they begin to enter the labor force and increase labor force participation rates. Other reasons given for not being in labor force are: "Not Enough Skills," "Taking Care of Family" and "No Jobs Available."

Industries. There is little difference in the types of industries in which the respondents work among the three intervals from graduation. The majority, just over 25 percent of the graduates, are employed in "Manufacturing," and about 23 percent are employed in the "Professional and Related Services" areas. [2] About 13 percent of the sample is employed in the "Retail Trade Industry." Among the respondents, this consists primarily of employment in grocery stores, bakeries, restaurants, gas stations and the like. The remainder of the sample is spread evenly (about 8 percent in each area) among "Public Administration;" "Transportation and Utilities;" "Finance, Insurance, Real Estate;" "Business and Repair Services." Only a few individuals report being employed in "Construction;" "Wholesale Trade;" "Agriculture, Forestry and Fishing." No one reported being employed in "Mining," "Personal Services," and "Entertainment and Recreation." The last two mentioned industries have a great reliance on communication which makes employment by a deaf person very difficult.

Occupations. The industries in which the respondents are employed provide an answer to the question of "where" they find jobs. The occupations of employed respondents tell in "what" capacity they are employed. The survey inquires about the titles and tasks of a respondent's jobs. Each job title is then assigned a specific occupational classification (U.S. Department of Commerce, 1982).

For the most part, this paper has compared the responses of the graduates at each of three time periods after graduation from high school. For occupations, however, the analysis will concentrate only on responses at five years after graduation. The reason for this is that education has a great impact on types of

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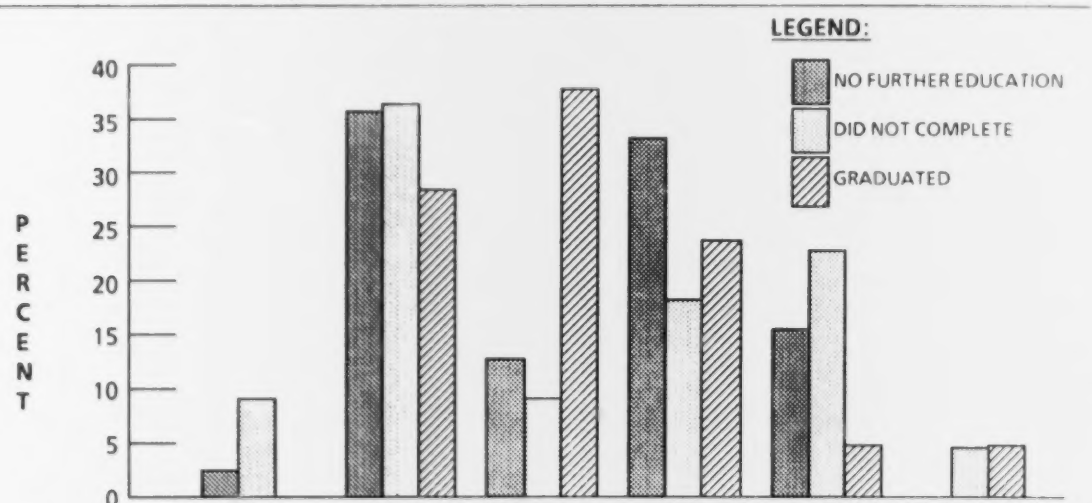
[2]Professional and related services include hospitals, schools and business services employing primarily technicians, teachers and accountants, among the graduate sample, specifically.

jobs people get, and since the majority of respondents were engaged in some type of educational activity until at least five years after graduation, only the fifth year will be analyzed.

All employed respondents who reported occupations were grouped into three educational levels: those who had no postsecondary education; those who were either continuing or had dropped postsecondary studies; and those who had completed some type of postsecondary education. For this analysis jobs are grouped into six major occupational categories (U.S. Department of Commerce, 1982). The categories reflect formal skill and/or training levels required for jobs falling within them, although there is considerable variability in educational requirements for the categories "Service Workers" and "Farming, Fishing and Forestry." Table 7 contains percentages of employed respondents in each of the six occupational groupings by the three educational classifications.

Table 7. Percent of respondents employed in various occupational categories five years after graduation from high school by postsecondary educational attainment. (N = 82)



OCCUPATIONAL CATEGORY OVERALL PERCENTAGE	3.7	34.1	18.4	26.8	14.6	2.4

Respondents who had had no further education were distributed among the occupational categories as follows: the highest percentage overall is in the "Technical Sales and Administrative Support" area, with "Operatives and Laborers" as the second most frequent category. This distribution generally holds for all educational levels except for postsecondary graduates who have the highest percentage in the area of "Precision Production, Craft and Repair." The high number of certificates and diplomas granted by the end of five years would suggest training programs in these areas.

It is also noteworthy that there are very few persons employed in the "Managerial and Professional" occupations. This is probably because most jobs in this area require four-year degrees. The majority of deaf persons pursuing baccalaureate level degrees seldom complete them in less than five years. As a result this study reports only 3.7 percent of graduates employed in this occupational category. The few who did report "Managerial and Professional" occupations however, had had little or no postsecondary education, suggesting possibly positions in a family-run business, or error in reporting.

Earnings. The effects of further education relative to the occupations of employed respondents have been examined. In a similar manner, weekly salaries of these same individuals are broken down by educational level and by years since graduating from high school. Using the Consumer Price Index, rates for the years 1981 through 1985 (U.S. Department of Labor, BLS, 1985), salary data reported for the survey years 1981, 1982, 1983, and 1984 were converted to 1985 dollar equivalents so that all earnings would be comparable. Table 8 contains a breakdown of mean salary amounts for full-time employed respondents by three time intervals since graduation. From Table 8 it is evident that the longer students are out of high school, the greater their earnings. This holds true for each of the three educational levels. As educational attainment increases, so does reported salary, although the increments are not large. The highest earners have

Table 8. Mean weekly salaries of full-time employed respondents categorized by postsecondary educational attainment and years since graduation.

	POSTSECONDARY EDUCATIONAL ATTAINMENT			
YEARS SINCE GRADUATION	NO EDUCATION	DID NOT COMPLETE	GRADUATED	OVERALL
ONE	222.12	213.57	226.00	220.82
THREE	235.33	225.50	226.00	231.67
FIVE	242.13	238.50	252.42	244.09

completed postsecondary degrees and have been out of high school for five years. It can also be noted that until degrees have been earned, and most especially a degree in a specific technical/vocational area, occupations and corresponding salaries show rather small incremental changes at a point just five years since high school. Greater change occurs beyond the five year mark, as indicated by some of the survey results where respondents ten and twenty years since graduating are included (MacLeod, 1981 & 1982; MacLeod-Gallinger, 1983-1985).

SUMMARY AND CONCLUSIONS

This longitudinal study is modeled according to a time-lag sequential format. In this instance, it consists of five graduating high school classes (1978, 1979, 1980, 1981, and 1982) surveyed two or three times over a five year span for educational and labor force variables. The focus of the analyses has been on the effects over time on additional education, labor force status, employment and earnings of 273 respondents. The subjects are split evenly between males and females, and range in age from 18 to 29.

Sixty percent of all the subjects in this study had engaged in some form of postsecondary education after graduation from high school, and one third of all respondents had attended college. Degrees earned by respondents were viewed

cumulatively at each of the three intervals. At the five year point, 18.8 percent of the sample had earned degrees. Almost three quarters of the college degrees were certificates and diplomas. The remaining quarter were mostly associate level degrees. There were only three bachelors' degrees, due in part to the greater length of time generally required for deaf individuals to complete four-year degrees.

Most postsecondary educational programs completed by respondents were in the vocational/technical area rather than in the arts and sciences. Twenty percent more deaf persons than hearing persons completed degrees in the occupational area of mechanical and engineering studies. A greater percentage of students nationally completed health and natural sciences programs than in the deaf group. Moreover, there were ten percent more individuals nationally who earned degrees in business and commerce, while more respondents tended to complete data processing programs.

The labor force activities of the sample group demonstrated lags relative to national figures for the same age groups. Participation rates among the respondents ran overall ten percent behind their hearing peers nationally. At the five year interval, where respondents' ages ranged 22-29 years, participation rates were more equivalent to national ones for persons 20-24 years of age. Almost equal percentages of respondents across time intervals were unemployed (20%). These rates are, on the average, seven percent higher than the same age groups nationally.

The majority of respondents (averaged 57%) reporting that they were out of the labor force were attending postsecondary school. The highest rate of enrollment was at the three year point since high school at 62.7 percent. National rates of enrollment for ages 18-24 years averaged 61.8%, slightly higher than among respondents overall. However, there was also a higher concurrent rate of

labor force participation nationally as compared to respondents for the same age group.

Employed respondents are largely found in the manufacturing sector as is true for the general population, though at a slightly lower rate. More respondents were employed in the professional, business and repair services and in public administration relative to workers nationally. This again, relates to programs of study undertaken by respondents and to some continuation of traditional employment patterns exhibited by deaf adults.

The effects of education on occupational category and earnings generally indicate that completion of postsecondary education makes a difference in the type of job obtained and the earnings rate of the respondents. However, as a group deaf persons continue to have depressed employment rates when compared to their hearing age peers.

The five-year sample consisting of individuals representing five class years who have responded more than once to the follow-up survey has made it possible to take a closer look at the educational, employment and earnings status of young deaf adults. It is clear that five years is not long enough for these students to complete postsecondary educational programs. It does, however, provide information about what instructional programs are pursued and rates of persistence in these programs. And although the career choices available to young deaf adults have been expanded over the years, there still appears to be a need for broadened career education and guidance.

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This is the seventh year of gathering information from graduates since the program was piloted in 1979-80. The responses of graduates who have repeatedly offered information about their educational and employment activities over the five-year period, 1981 to 1985, have been studied for this report.

We thank these alumni of secondary programs for the deaf for their continued willingness to respond to the survey, thereby making the study possible.

Janet MacLeod-Gallinger

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NTID Program Manager

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